



FY09 DOI Aviation Safety Summary

November, 2009



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DOI aviation safety and aircraft mishap prevention is based on the philosophy that all aircraft mishaps can be prevented and that mishap prevention is an inherent function of management.

Zero aircraft mishaps is our attainable goal. Improved aviation safety reduces cost, saves lives, and promotes more efficient and effective accomplishment of important natural resource missions.

Success in aviation safety is a partnership effort. DOI's aviation safety success is the result of the coordinated efforts of the National Business Center Aviation Management Directorate (AMD) team, bureau aviation personnel at every level, and the commercial aviation vendors who directly support >70% of all DOI aviation operations.

DOI's Aviation Safety and Aircraft Accident Prevention program is founded on the four pillars of an integrated **Safety Management System (SMS)**:

Safety Summary Points of Contact

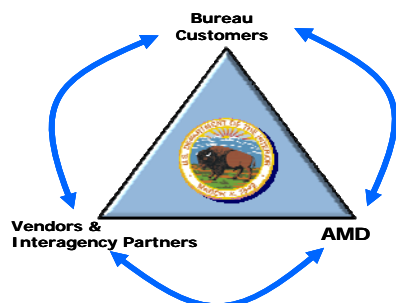
John Mills— Aviation Safety Manager (Acting) (208) 433-5072

Stephen Rauch—Air Safety Investigator (208) 433-5073

Les Herman—Aviation Program Evaluation Specialist (208) 433-5074

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DOI Aviation Partnership Model



Policy, Risk Management, Assurance, & Promotion



4 Pillars of DOI's Aviation Safety Management System



An ISO 9001:2008 CERTIFIED
Shared Services Provider
BSI FS 037331





Overview

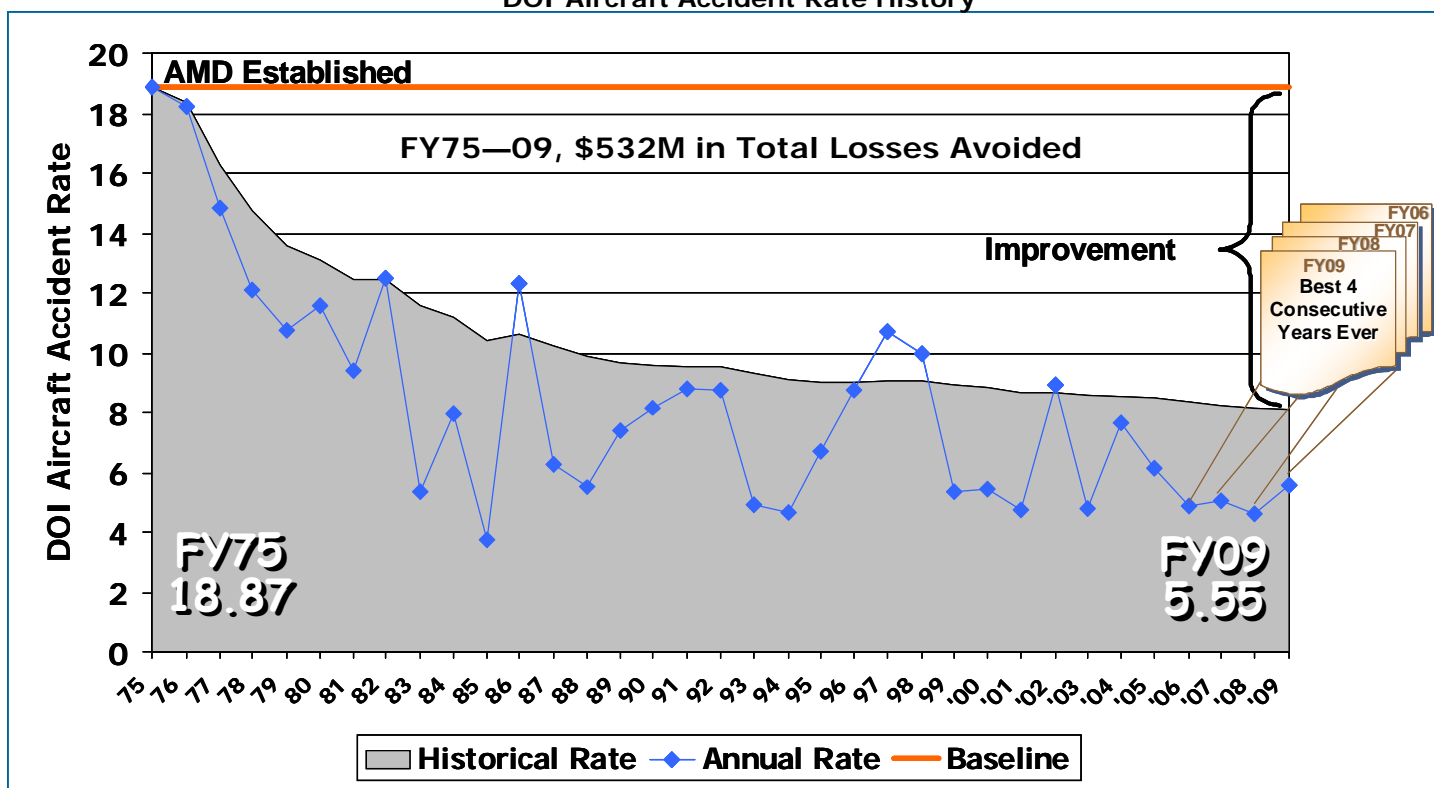
Aircraft Accident Rate



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In FY09, the U.S. Department of the Interior (DOI) continued a longstanding positive trend in **lowering the historical rate¹** of DOI aircraft accidents, decreasing it 0.7% to 8.12 accidents per 100K flight hours. Another notable FY09 aviation safety achievement was that **FY06-FY09, represents the best 4-consecutive years of aviation safety in DOI history** with an accident rate **27% lower than the previous four year period.**

DOI Aircraft Accident Rate History



In FY09, the Department achieved an annual aircraft accident rate² of 5.55 accidents per 100,000 flight hours, up from 4.63 in FY08. In FY09, the Department flew 72,007 total flight hours, 7,282 (11%) more than the previous year. These flight hours were supported in part by 371 bureau requested AMD supported aviation contracts, aircraft inspections, and pilot evaluations, 4% more than the previous year and 55% more than in FY06.

Since 1975, DOI's aviation safety program has resulted in estimated savings of \$532M to the Department and its supporting vendors in reduced losses³.

¹Historical aircraft accident rate is defined as total historical aircraft accidents per 100,000 flight hours flown.

²Annual aircraft accident rate is defined as total aircraft accidents in one year per 100,000 flight hours flown.

³Based on Federal Aviation Administration (FAA) and National Transportation Safety Board (NTSB) accident cost methodologies.



Overview

Aircraft Mishap Summary



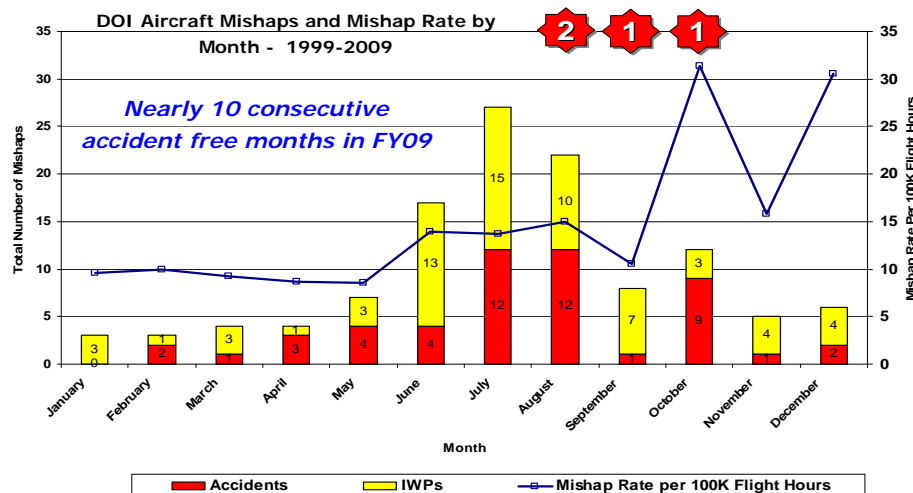
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Despite FY09's contribution to the notable aviation safety improvements of the last four years, DOI experienced an increase in aircraft accidents (4) in FY09 compared to the three previous years. This increase was led by a marked increase in DOI fleet aircraft landing accidents at off-airport strips in Alaska. The Department also experienced one fatal aircraft accident involving a contracted Single Engine Air Tanker (SEAT) conducting fire suppression operations.

FY09 DOI aircraft accident occurrences were consistent with previously identified high mishap rate/occurrence months (October, July, August). Likewise, for the fourth time in as many years, DOI went the majority of the fiscal year without an aircraft accident.

FY 2009 DOI Aircraft Mishap Summary

Mishap Bureau, Date	Location	Phase of Flight	Mishap Type	Pilot & Aircraft
NPS October 2, 2008	Alaska	Off-Airport Landing	Accident	Fleet
FWS July 27, 2009	Alaska	Off-Airport Landing (aircraft damage)	Incident-With-Potential (IWP) ⁴	Fleet
BLM August 20, 2009	Nevada	Fire Suppression	Accident (1 Fatality)	Contract Vendor
FWS August 30, 2009	Alaska	Off-Airport Landing	Accident	Fleet
NPS Sep. 3, 2009	Alaska	Off-Airport Landing	Accident	Fleet
USGS Sep. 29, 2009	Louisiana	On-Airport Landing (aircraft damage)	IWP	Fleet



Key: Number of accidents that occurred in this month

⁴Incidents –With-Potential (IWP) are aircraft mishaps that while not determined to be “accidents” by the National Transportation Safety Board demonstrated a high potential to have resulted in an accident had one or two additional factors been present, meriting a more in-depth investigation than is afforded aircraft incidents.



Overview

Aviation Flight Hour & Safety Statistics



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DOI Flight Hours

Type	Airplane	Helicopter	Total Hours	Cost
Contract	12,599.7 (+14.5%)	26,730.2 (+40.0%)	39,329.9 (+30.7%)	\$112,981,614.13 (+47.6%)
Fleet	17,035.0 (-6.2%)	1,776.9 (-2.8%)	18,811.9 (-5.9%)	\$ 6,541,359.25 (-1.3%)
ARA	11,925.3 (+21.9%)	1,940.5 (-60.0%)	13,865.8 (-5.2%)	\$ 8,781,766.85 (-17.0%)
Total	41,560.0 (+6.7%)	30,447.6 (+18.1%)	72,007.6 (+11.3%)	\$128,304,740.23 (+36.9%)

*Percentages are increases or decreases over FY 08

FY 09 Annual accident rate = $\frac{4 \text{ reportable accidents}}{72,007.6 \text{ reportable DOI flight hours}} * 100,000 = 5.55 \text{ accidents/100,000 hours}$

Historical accident rate = $\frac{249 \text{ reportable accidents}}{3,065,525.1 \text{ reportable DOI flight hours}} * 100,000 = 8.12 \text{ accidents/100,000 hours}$
(35 fiscal years)

Accident and IWP Costs Total DOI and related commercial vendor aircraft accident costs for the four accidents experienced in FY09 were \$4.6M, up from \$1.5M in FY08 (driven by the fatality). The average FY09 aircraft accident cost was \$1.5M. Total cost for the two FY09 DOI Incidents-With-Potential (IWP) was \$38,025 (\$19,012.50 per IWP average).

Onsite Investigation Costs AMD's average per aircraft onsite accident investigation costs for the four aircraft accidents in FY09 was \$7,790.50, 50% lower than the average FY08 cost for three aircraft accidents. Average AMD onsite investigation costs for the two FY09 IWP's was \$2,112.50. Based on the premise that lessons learned from the investigation of one aircraft accident/IWP can prevent the occurrence of a future accident, the potential return on FY09 accident and IWP investigation costs were 191% and 719% respectively.

Cumulative Losses Prevented — Since 1975, DOI's aviation safety program has resulted in estimated savings of \$532M to the Department and its supporting vendors in reduced losses.

FY09 Accident Prevention Products—AMD collaborated with the bureaus and USFS in producing and distributing the following mishap prevention products (38% increase over FY08):

- 4 - Interagency Aviation Safety Alerts
- 3 - Interagency Aviation Lessons Learned
- 5 - DOI Aviation Lessons Learned
- 2 - DOI Accident Prevention Bulletins
- 8 - Interagency Accident Prevention Bulletins

Aviation Safety Training Delivered — 27,273 online modules and 54,609 classroom delivered module hours

Aircraft Safety Inspections Performed — 1,951⁵

Pilot In-Flight Evaluations Conducted — 3,386⁵



⁵Includes DOI Fleet, Commercial Vendor, and Cooperator aircraft from other agencies. Pilots receive evaluations for each specific special use mission area qualification.



Risk Management Fleet Accidents



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In FY09, the Department experienced three fleet aircraft accidents. Each occurred in Alaska during the landing phase of operations at off-airport locations. DOI also experienced two FY09 fleet aircraft Incidents-With-Potential (IWP) during landing, one in Alaska, the other in Louisiana.

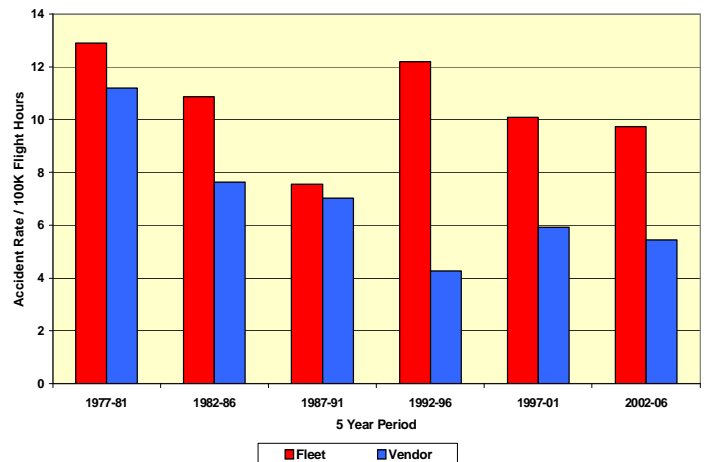
DOI fleet aircraft have historically experienced higher accident rates than DOI commercial vendors flying the same or similar missions. Fleet aircraft in Alaska historically experience higher numbers of off-airport accidents than their L48 fleet and Alaska vendor counterparts.

There are a number of factors that contribute to these trends including, but not limited to: the availability of pilot ground and flight training, workload and competing priorities for bureau scientists/LE officers who also operate fleet aircraft as dual-function pilots. The greater use of DOI fleet fixed wing aircraft into and out of off-airport strips in Alaska is another contributing factor to this trend.

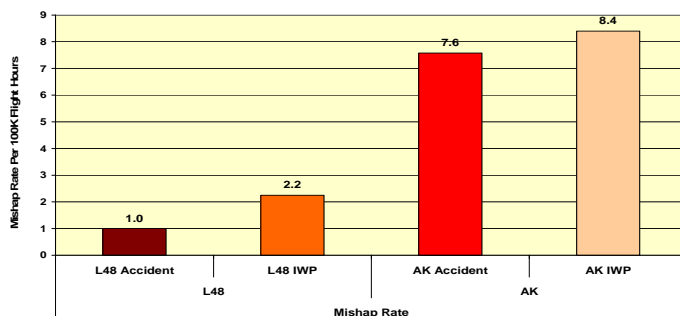
Although investigations of the FY09 fleet accidents remain ongoing, AMD and the bureaus have undertaken a number of risk management steps to address historic fleet accident rate issues including:

- Conducted Safety-Stand-Downs at all DOI Alaska operating bases following the FY09 accidents.
- Continued conduct of periodic off-airport, float, and ski flight clinics in Alaska. Most recent off-airport clinic in early FY10 was attended by AMD safety investigator.
- Development of human factors and risk management courses for pilots, managers and SES.
- Inaugural DOI National Pilot Ground School in December, 2008 (52% of all DOI fleet pilots attended).
- Proposed AMD-bureau working group to examine: (a) off-airport terminology, (b) color-coded risk classification of all off-airport locations, (c) off-airport training and qualifications, (d) ways to emphasize the "go-around unless everything is right" philosophy rather than a "land unless" mindset.

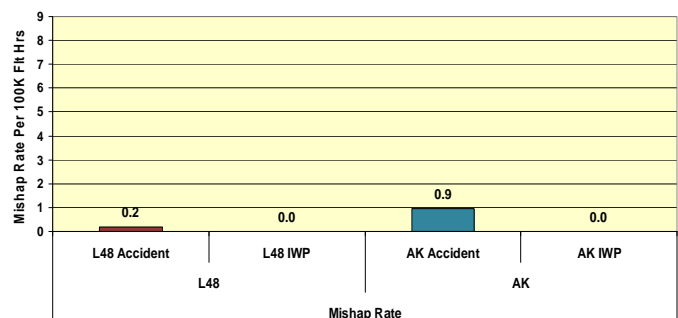
Comparison of DOI Fleet & DOI Vendor Accident Rates by 5-Year Period



DOI Fleet OFF-AIRPORT Mishap Rates
Ten Year Average: FY2000-2009



DOI Vendor OFF-AIRPORT Mishap Rates
Ten Year Average: FY2000-2009





Risk Management Vendor Accident



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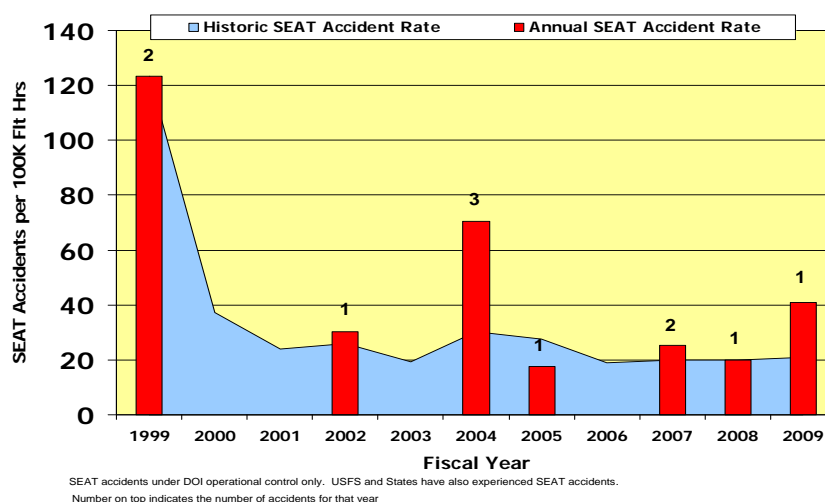
In FY09, while the Department experienced a total of four aircraft accidents, only one involved a commercially procured (vendor) aircraft. That accident, which occurred in August during a fire suppression mission, involved a Single-Engine Air Tanker (SEAT) and tragically claimed the life of the contract pilot. This was the first fatal accident suffered by the Department since August, 2006 (3 years before).

The investigation of this accident by AMD and the National Transportation Safety Board (NTSB) is ongoing. However, preliminary results indicate this accident bears striking similarities to several previous SEAT accidents where highly trained and experienced *Level I* pilots, found their mechanically sound aircraft in a flight regime that was beyond the capability of the aircraft-pilot system to avoid flying into the terrain. In the past 5 years the Department has experienced 5 SEAT accidents, the last 4 of which fit this scenario. The SEAT historic and annual accident rates are consistently higher than any other aircraft employed by the Department.

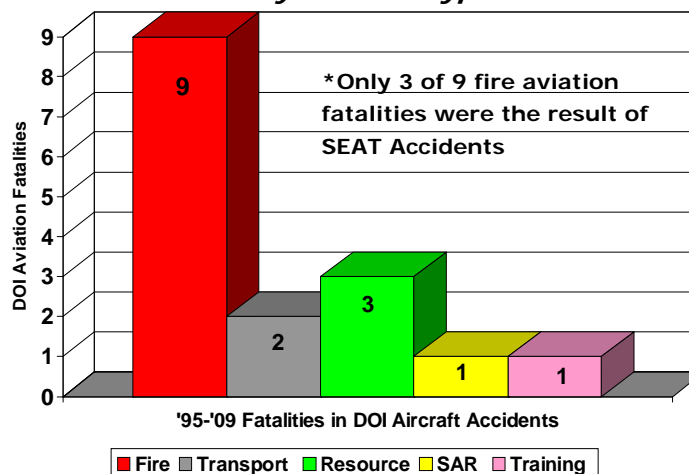
The Department, together with the Bureau of Land Management (BLM) and the industry SEAT Association, has implemented a number of risk management initiatives to eliminate or reduce SEAT accidents and to improve the efficiency of SEAT operations including:

- Renewed support for BLM Aerial Firefighting Institute (SEAT Academy), reviewed curriculum.
- Conducted mission compatibility and program-level risk assessment of the SEAT mission
- BLM contracted Human Factors in Aviation study of SEAT mission. Report due December, 2009.
- Increased AMD/BLM collaboration to identify and address poor performing vendors and pilots.
- Conducted human factors and risk management reviews of individual SEAT vendors.
- Coordinated with industry to address previous SEAT accident report recommendations.
- Developed SEAT safety aids and lessons learned.
- Updated Interagency SEAT Operations Guide (ISOG) with lessons/recommendations from previous mishaps.
- Incorporated SEAT accident lessons learned into the 2009 Annual Fire Refresher for BLM wildland fire fighters.

11 Year DOI SEAT Accident History *11 Aircraft Accidents*



'95-'09 Fatal Accidents *By Mission Type*





Safety Policy



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Mission & Safety Gains Realized Through the Development of First-Ever DOI Law Enforcement Short Haul Policy

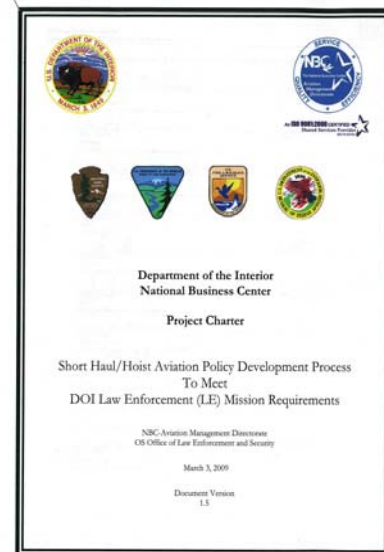
In FY09, after 20 years of operating without an aviation policy to support the safe and effective employment of Short Haul in DOI law enforcement operations, Department and bureau aviation and law enforcement (LE) subject matter experts joined in a collaborative policy development initiative to remedy this. The resultant policy, was completed in record time and was signed by 10 Department and bureau aviation and LE senior executives. As a result of the new policy, DOI LE officers achieved unprecedented success in eradicating marijuana plants from DOI lands (in excess of 660,000 plants) and arresting those responsible (>50 arrested). One DOI LE officer estimated that the use of Short Haul resulted in a 6:1 improvement in operational efficiency in actual missions.



LE Short Haul Training

DOI and USFS Aviation Management Agencies Leverage Unique Tri-Agency Collaboration, Sign First-Ever Joint Authorization Letter for Use of Very Large Air Tankers (VLAT)

Since 1958, the interagency aerial firefighting community has experienced a pattern of mishaps, resulting in 136 Large Air Tanker fatalities. As part of a concerted interagency effort to break this chain and improve the safety of aerial firefighting, AMD and USFS embarked on a groundbreaking tri-agency partnership with NASA to bring a new science-based approach to the suitability assessment of a new class of aerial firefighting aircraft, the Very Large Air Tanker (VLAT). Leveraging the combined firefighting mission, aviation management, engineering, and flight test expertise within AMD, USFS, and NASA, the team examined VLAT airworthiness, aircraft compatibility, and operational policies and procedures within a mission context to determine overall aircraft class suitability. In April 2009, NASA engineers and flight test pilots, along with AMD and USFS aviation management provided managers at the National Interagency Fire Center in Boise with a comprehensive review of the VLAT assessment process, findings, and recommendations. The recommendations derived from the NASA assessment served as the foundation for the development of a first-ever joint DOI-USFS authorization letter for a new class of firefighting aircraft. As a result of this groundbreaking aviation safety policy initiative, the VLAT was added to the arsenal of tools available to interagency fire managers. VLAT were used extensively by the State of California in FY09. VLAT also saw limited use in fighting State of Alaska fires in FY09.





Safety Assurance

Through Continual Improvement



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Program Evaluations

DOI's aviation program evaluation function serves as an integral element of the Department's aviation Safety Management System "Assurance" pillar and a critical piece of the DOI A-123 management controls assurance program. In collaboration with the bureaus, AMD conducted aviation program evaluations are held on-site at bureau aviation unit locations. The objectives of the program evaluations include:

- Assessment of unit compliance with DOI aviation policy and Federal regulation.
- Evaluation of AMD's effectiveness in communicating and implementing DOI aviation policies.
- Identification of areas of potential improvement, sharing best practices, and support needs for each unit.

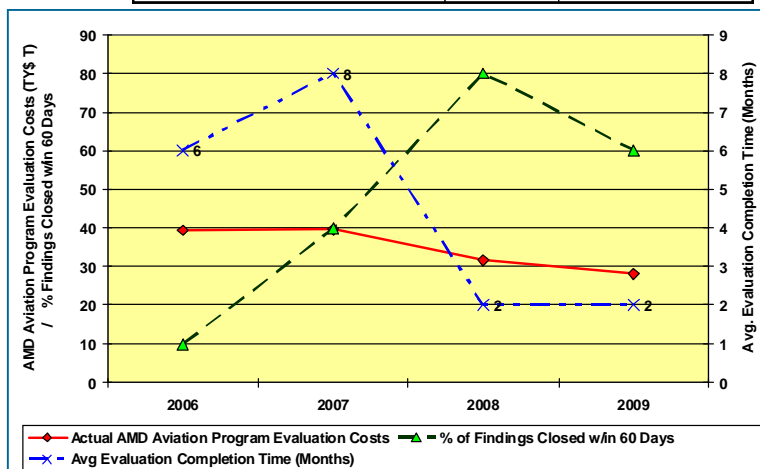
FY09 Results & Performance

In FY09, AMD conducted 10 aviation program evaluations among three bureaus. These resulted in a total of 47 total findings and no material weaknesses. Findings, corrective measures, and resolutions were collaborated with the bureaus and tracked using AMD's ISO 9001-2008 certified program evaluation process. As a direct result of these ISO certified processes (instituted in FY08), AMD achieved a 67% reduction in program evaluation completion time, a 28% reduction in cost, and a 600% increase in findings closed performance over FY06.

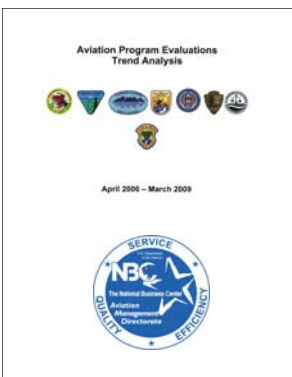
FY09 Analytics In FY09, AMD's Aviation Program Evaluation Specialist conducted the first-ever comprehensive analysis of historical aviation program evaluation findings.

Analyzing 38 individual aviation program evaluations and 217 total findings over the period April 2005—March 2009, a list of the "Top 4 Findings" found in a significant number of program evaluations was published. As a result of this analysis, AMD has initiated a collaborative effort with bureau national aviation managers to translate these analytics into action plans to eliminate the Top 4 Findings.

Locations	Dates	Results of Review
FWS - Region 9	10/08	5 Findings
NPS - SE Region	10/08	7 Findings
FWS - Region 1 (HI)	11/08	4 Findings
Idaho Department of Fish & Game	01/09	8 Findings
MMS - Gulf of Mexico Region	03/09	7 Findings
BLM - ID	04/09	4 Findings
USGS - Eastern Region (SE)	04/09	3 Findings
BLM - Montana	05/09	2 Findings
BIA - Alaska Region	06/09	4 Findings
USGS - Eastern Region (NE)	06/09	4 Findings
No Material Weaknesses Found		Total - 47 Findings



An ISO 9001:2008 CERTIFIED
Shared Services Provider
BSI FS 537331



The Top 4 findings, 2005 - 2009

- **Incomplete or out of date aviation plans.**
 - 24 of 38 evaluations, or 63.1%
- **MOUs/IAAs/SLAs are missing or out of date.**
 - 23 of 38 evaluations, or 60.5%
- **Required Line Manager (M2)/Supervisor (M3) training not conducted or current (per OPM-04).**
 - 16 of 38 evaluations, or 42.1%
- **Minimal or no SAFECOMs compared to total amount of bureau flight time.**
 - 14 of 38 evaluations, or 36.8%



Safety Assurance

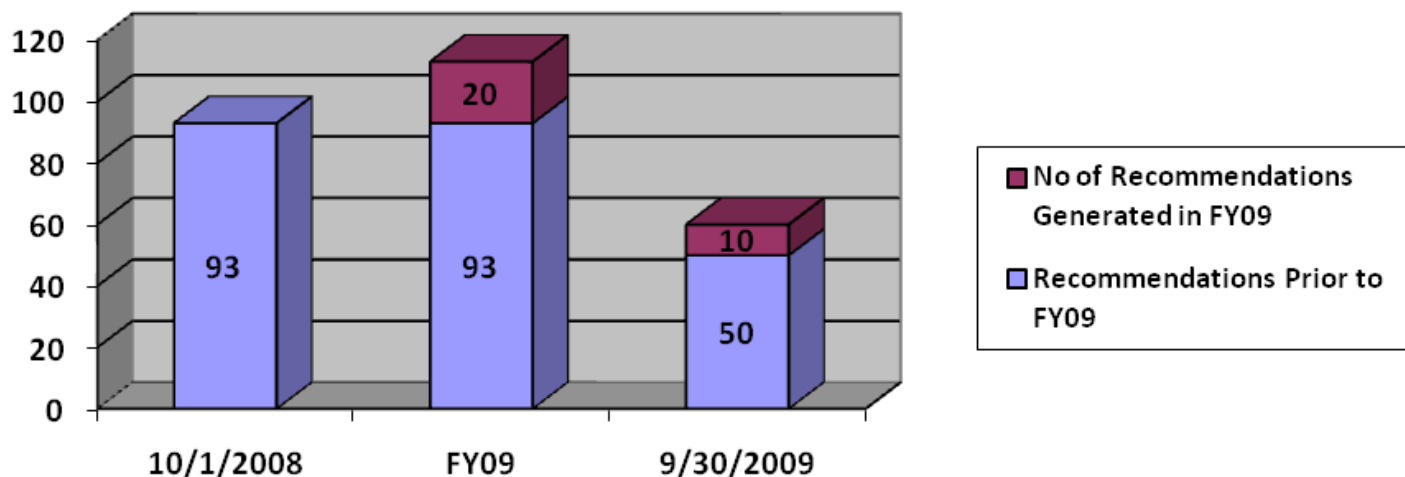
*Turning Aircraft Mishaps to
Lessons Learned to
Corrective Actions to
Fewer Accidents*



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Aircraft Mishap Review Board (AMRB) Recommendations - In 2008, the Department's Aircraft Accident Investigation process was independently certified in compliance with the international quality standard, ISO 9001-2008. In 2009, AMD received recertification of its ISO 9001-2008 registration. Prior to AMD's incorporation of a Quality Management System (QMS) and subsequent ISO certification in 2008, DOI Aircraft Mishap Review Board (AMRB) recommendations were never tracked to conclusion. AMRB recommendations provide the critical, actionable lessons learned whose completion is a key element of the Department's strategy to eliminate "repeat" aircraft mishaps. When first cataloged in 2008, there were 93 outstanding AMRB recommendations. AMRB's conducted in 2009 added 20 more recommendations. As a result of the ISO 9001-2008 certified processes and related performance tracking measures put in place in 2008 by AMD, the bureaus and AMD achieved a significant **47% reduction in the number of outstanding AMRB recommendations** by the end of FY09. Additionally, determination of the factors related to those that remained outstanding (e.g. lack of available staffing, funding, other service priorities, etc.) was conducted and estimated completion dates were negotiated.

Outstanding AMRB Recommendations



The following actions from past AMRB's are either currently in progress or incomplete:

NBC-AMD Technical Services Division.

52 actions incomplete - completion due date no later than **June 1, 2010**.

NBC Acquisition Services Directorate - Boise.

2 action in progress – completion due date no later than **December 15, 2009**.

6 actions in progress – completion due date no later than **December 31, 2009**.



Safety Promotion

Recognizing Safety Excellence

Promotion



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Notable FY09 Bureau Continuous Accident-Free Flying Milestones:

MMS - 35 years.

OSM - 23 years.

BOR - 12 years,

USGS - 3 years.

BIA - 2 years.



The “**AIRWARD**” is an interagency award established to provide timely recognition to any individual who has demonstrated positive behavior or actions promoting

Interior aviation safety such as correcting a hazardous situation, submitting a good idea, or just making a difference. Any individual having sufficient knowledge of the individual’s action may submit a nomination. Recipients receive an Airward Certificate along with an embroidered **AIRWARD** baseball cap.



AirWard
Mikel Hardy
Ponderosa Aviation

How to Make a Not-So-Normal Landing Look Easy

While conducting a fire reconnaissance flight on July 25, 2009 Mikel Hardy, the pilot-in-command of N999GB, an Aero Commander, experienced a total loss of hydraulic pressure when the O-ring in the left auxiliary gear retraction cylinder failed. The O-ring failure allowed a significant loss of hydraulic fluid and the subsequent loss of hydraulic pressure.

Mikel immediately terminated the mission and returned to the Cedar City Air Tanker Base to make an emergency landing. The loss of hydraulic fluid/pressure forced Mikel to use the emergency back-up nitrogen bottle to deploy (extend) the landing gear. Mikel, using great crew resource management (CRM), instructed the Air Tactical Group Supervisor (ATGS) to activate the hydraulic reserve system as the airplane crossed the runway threshold.

As a result of Mikel’s training and his calm approach to handling this in-flight emergency he was able to make an otherwise uneventful “no-flap, no-hydraulics” landing. In fact, if you simply watched the aircraft land and taxi in you would have had no idea that an emergency had just been quietly resolved.

Mikel’s initial identification of the emergency, his quick and correct response, and his excellent airmanship and use of the other crew member took what otherwise could have been a badly damaged aircraft (or worse) and turned it into a great example of professional airmanship.

Great job Mikel for taking a conservative approach to an in-flight emergency.





Safety Promotion

Recognizing Personal Excellence

Accident Free DOI Fleet Pilots

Promotion



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Name

Bureau

Aviation Management Directorate

Brennan, Gary	AMD
Bussard, Joe	AMD
Castillo, James	AMD
Craig, Walker	AMD
Dickson, Jeffery	AMD
Fowler, K. Dale	AMD
James, William	AMD
Kearny, Patrick	AMD
Mancano, Maria	AMD
Miller, Arlyn	AMD
Palmer, Earl Jr.	AMD
Stone, Bart	AMD



Bureau of Land Management

Curl, R. Ryan	BLM
Duhrsen, Jeffrey L.	BLM
Lynn, Michael	BLM
Stright, John	BLM
Warbis, Rusty	BLM



Bureau of Reclamation

Norton, Michael	BOR
Phelps, Randy	BOR



Bureau of Indian Affairs

Amicarella, Michael	BIA
---------------------	-----



Fish and Wildlife Service

Anderson, Paul	FWS
Bayless, Shawn	FWS
Bedingfield, Isaac J.	FWS
Bentley, V. Ray	FWS
Beyer, Duston	FWS
Bollinger, Karen	FWS
Bredy, James	FWS
Clark, Stephen	FWS
Dobson, Garland	FWS
Ellis, James (Jim) F.	FWS
Ernst, Richard	FWS
Floyd, Jerry	FWS
Fox, Kevin	FWS
Guldager, Nikolina	FWS
Hink, Mike	FWS
Hinkes, Michael	FWS
Huggins/Buelna, Elizabeth	FWS
Hurd, Shay	FWS
Knudsen, Heather	FWS
Koneff, Mark	FWS
Larned, William	FWS
Liddick, Terry	FWS
Liedberg, Paul	FWS
Lubinski, Brian	FWS
MacDonald, Robert D.	FWS
Mallek, Ed	FWS
Moore, Charles	FWS
Muller, Franz	FWS



Name

Bureau

Fish and Wildlife Service (cont'd)

Olson, Nathan	FWS
Powell, Doug	FWS
Rhodes, Walt	FWS
Richardson, James Ken	FWS
Rippetto, Dave	FWS
Roetker, Fred	FWS
Scotton, Brad	FWS
Solberg, John	FWS
Spindler, Michael (Mike)	FWS
Stark, Rory	FWS
Sundown, Robert	FWS
Thorpe, Philip	FWS
VanHatten, G. Kevin	FWS
Wade, Mike	FWS
Walters, George	FWS
Ward, James	FWS
Wilson, Heather	FWS
Wittkop, Jim	FWS
Wortham, James	FWS



National Park Service

Alsworth, Leon	NPS
Evans, William	NPS
Fink, Leon F.	NPS
Gilliland, Allen	NPS
Herring, J. Nick	NPS
Howell, Galen	NPS
Kangus, W.B. "Tug"	NPS
Kimmel, John	NPS
Lenon, Bruce	NPS
Loach, James	NPS
Mazur, Stephen	NPS
McMillan, Seth	NPS
Milone, Colin B	NPS
Monterastelli, Thomas	NPS
Richotte, Richard	NPS
Shults, Brad	NPS
Stevenson, Dan	NPS
Taylor, Scott	NPS
Traub, James	NPS



National Park Service - U.S. Park Police

Bohn, Keith	USPP
Burchell, Kenneth	USPP
Chittick, Kevin	USPP
Davis, Craig	USPP
Duckworth, Kevin	USPP
Haapapuro, Eric	USPP
Harasek, Kathleen	USPP
Hertel, Jeffery	USPP
Perkins, Christopher	USPP
Varanelli, Mark	USPP
Wright, Keaton	USPP



U.S. Geological Survey

Christiansen, William	USGS
Heywood, Charles	USGS
Wright, C. Wayne	USGS





Safety Promotion

National Recognition



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DOI National Business Center Aviation Management Directorate Recognized as Federal Aviation Program of the Year

On July 28, 2009 at the General Services Administration's (GSA) annual *FedFleet* conference and awards ceremony in Chicago IL, DOI's National Business Center Aviation Management Directorate (AMD) was recognized as the Federal Aviation Program of the Year (Small Category).

The GSA, which sponsors the Interagency Committee on Aviation Policy (ICAP), promotes, coordinates and sponsors the annual Federal Aviation Awards program to recognize and publicize excellence in Federal aviation during the previous calendar year. The winning program for this prestigious award is judged to be the **safest, most efficient, and effective, in all aspects** of flight program management, which includes aviation management/administration, operations, maintenance, training, and safety.

This year, more than 25 Federal aviation programs were eligible to apply for the Federal Aviation Program Award (Small Category).

According to GSA Deputy Associate Administrator and ICAP Chair Becky Rhodes, AMD was selected from among the many competing Federal aviation programs because of its **demonstrated leadership in metrics and analytics** that support improved operation and business practices and have resulted in consistent and measureable aviation safety improvements within DOI. AMD's ISO 9001-2008 certification in 2008 (and recertification in 2009), Federal Aviation Gold Standard recognition, OMB certification as a Federal Asset Sales Center of Excellence, and demonstrated close collaboration with the aviation industry to improve safety, efficiency, and mission effectiveness set them and DOI apart from all Federal Aviation programs in their category.



Members of the DOI Aviation Management Team accept the Federal Aviation Program of the Year Award at *FedFleet* 2009 in Chicago, July 28, 2009. L-R: Harlan Johnson, NBC-AQD Boise Branch Chief, Jim Castillo, Aviation Safety Compliance Specialist, Eastern Regional Office, Mark Bathrick, AMD Associate Director, Gary Kunz, AMD Western Regional Office Director, Bob Galloway, AMD Aviation Safety Manager.



FY10 Outlook & Initiatives



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FY10 Outlook and Initiatives:

The outlook for FY10 is to continue the progress of the last four years (best 4 consecutive aviation safety years in DOI history) as we focus on our attainable goal of zero aircraft mishaps. Aviation Safety initiatives continued in and begun in FY10 will be founded on the four pillars of the Department's Aviation Management System and will utilize the *DOI Aviation Partnership Model* to achieve desired results.

Policy

- Distribute and implement new DOI Aviation Departmental Manuals (DM) - updated for the first time in 13 years. Surnaming process slated for Q1 FY10.
- Develop and issue new aviation Operational Procedures Memoranda (OPM) to compliment new DM's.
- Update interim Law Enforcement Short Haul Policy based on 1st season lessons learned.
- Continue collaboration among AMD, bureaus, and outside agencies to continue policy development for safe employment of Unmanned Aerial Systems (UAS).

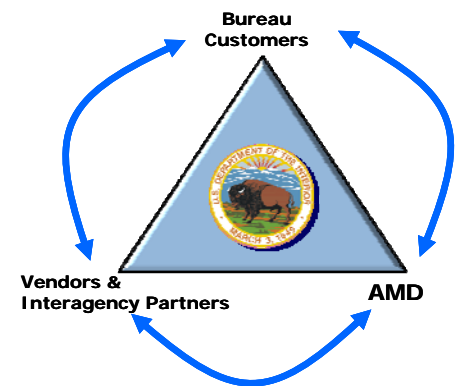
Risk Management

- Strengthen AMD and USFWS partnership to develop initial pilot training and proficiency program for the new Kodiak DOI fleet airplane to ensure safe and efficient fielding of this FAA defined Technologically Advanced Aircraft (TAA).
- Emphasize and support the use of Operational Risk Management techniques during all AMD conducted bureau aviation program evaluations.
- Continue collaboration on development of revised pilot training requirements, pilot and inspector standardization program and examine annual flight hour requirements. Department Pilot Training Steering Committee established in FY09.
- Continue emphasis of human factors courses for employees, supervisors, managers, and senior executives (human factors are a contributing factor in >80% of all DOI aircraft mishaps)
- Assess off-airport requirements, assets, risk decision processes, training, and pilot qualification criteria.

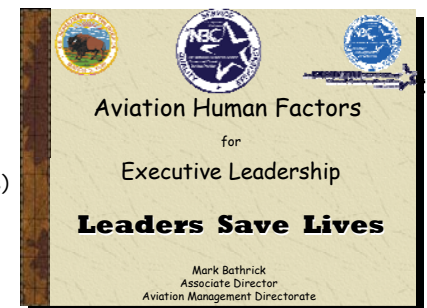
Assurance

- Employ ISO 9001-2008 processes to continue improved tracking and close-out of Aircraft Mishap Review Board and Aviation Program Evaluation findings.

DOI Aviation Partnership Model



Quality - Service - Efficiency - Safety



4 Pillars of DOI's Aviation Safety Management System



An ISO 9001:2008 CERTIFIED
Shared Services Provider
800.25.5372/21

- Leverage the recently completed Interagency Aircraft Accident Database (IAAD) to continue development of actionable analytics with accident trends and human factors.
- Utilize "Top Ten" Program Evaluation Findings to assist bureau managers in eliminating future findings.
- Partner with fire bureaus and USFS to examine ways to reduce fire mission aviation fatalities.
- AMD and Bureaus in Alaska off-airport landing accident reduction initiatives (75% of FY09 accidents were associated with off-airport landings in AK).

Promotion

- Collaborate with industry and acquisition partners to develop "Gold Program" to recognize top performing vendors.
- Partner with acquisition to incorporate "accident free" incentives in DOI aviation contracts.
- Develop telephonic option to the web-based SAFECOM hazard reporting system to facilitate increased usage from the field.

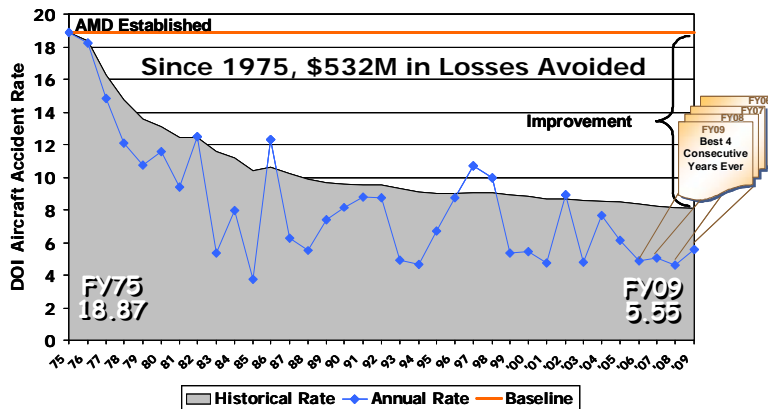


Executive Summary

(Take Away Sheet)



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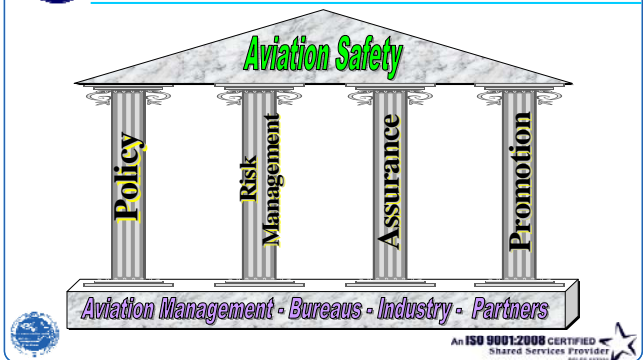


DOI Aviation Accident Rate

FY06-09 = Best 4 Consecutive Years Ever



4 Pillars of DOI's Aviation Safety Management System



4 Accidents

- 3 Accidents—Alaska (off-airport landing)
- 1 Accident (Fatal) - Nevada (Contracted air tanker)
- 2 Incidents w/Potential (both landing, one off-airport)

FY 09 Annual accident rate = $\frac{4 \text{ reportable accidents}}{72,007.6 \text{ reportable DOI flight hours}} \times 100,000 = 5.55 \text{ accidents/100,000 hours}$

Historical accident rate = $\frac{249 \text{ reportable accidents}}{3,065,525.1 \text{ reportable DOI flight hours}} \times 100,000 = 8.12 \text{ accidents/100,000 hours}$
(35 fiscal years)

Although investigations of FY09 aircraft accidents remain ongoing, Aviation Management Directorate (AMD) and the bureaus have previously taken steps to address historic fleet accident rate issues including:

- Safety Stand Downs conducted by AMD-NPS-FWS at all Alaska operating bases following the FY09 accidents.
- Periodic off-airport, float, and ski flight clinics conducted in Alaska.
- Development and delivery of human factors/risk management courses for pilots, managers and senior executives.
- Conducted inaugural DOI National Pilot Ground School in December, 2008 (52% of all DOI fleet pilots attended).
- BLM contracted Human Factors in Aviation study of SEAT mission. Report due December, 2009.
- 1,951 aircraft inspections & 3,386 pilot evaluations conducted by AMD, 22 DOI/interagency safety bulletins/lessons learned published (38% >FY08).

Notable FY09 AMD/bureau aviation policy achievements:

- Mission & safety gains realized through the development of first-ever *DOI Law Enforcement Short Haul Policy*. (>660,000 marijuana plants eradicated, >50 arrests, 6:1 improvement in operational efficiency)
- DOI and USFS aviation management agencies leveraged unique tri-agency collaboration with NASA, signed first-ever joint-authorization letter for use of Very Large Air Tankers (VLAT).

DOI Aviation Program Evaluation (APE) safety assurance function FY09 accomplishments:

- Assessed 10 bureau units for compliance with DOI policy, Federal regulation; supported DOI A-123 program.
- Identified areas of potential improvement (47), best practices, and additional support needs for each unit.
- Analysis of 38 historic evaluations & 117 findings revealed "Top-4." AMD collaborating with bureaus to correct.
- Since FY06, APE has achieved 28% reduction in cost, 67% lower cycle time, & 600% increase in findings closed.
- Improved closure of Aircraft Mishap Review Board (AMRB) recommendations 47% by applying ISO 9001 process.

- AMD selected by GSA from among 25 eligible agencies as ***Federal Aviation Program of the Year*** (Small Category); a first for DOI.

- **NOTEABLE FY09 Bureau Continuous Accident-Free Flying Milestones:** MMS—35 years; OSM—23 years; BOR—12 years; USGS—3 years, majority of DOI fleet pilots remain accident free throughout careers.

- 27,273 online modules and 54,609 hours of classroom and hands-on aviation safety training were delivered to DOI and interagency personnel.

